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09/386,709	08/31/1999	DAVID J. BRAYDEN	99.1081.US	1709

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EXAMINER	
GRASER, JENNIFER E	

ART UNIT	PAPER NUMBER
1645	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/386,709	Applicant(s) BRAYDEN, DAVID J.	
	Examiner Jennifer E. Graser	Art Unit 1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 08 November 2004.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-3,5-9,11,12,21-25,27-31,33,35,38,39 and 41-45 is/are pending in the application.

4a) Of the above claim(s) 1-3,5-9,11 and 12 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 21-25,27-31,33,35,38,39 and 41-45 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/8/04 has been entered.

Claims 21-25, 27-31, 33, 35, 38, 39, 41-43 and newly presented claims 44 and 45 are currently under examination.

Claims 1-3, 5-9, 11 and 12 were previously withdrawn from consideration. Applicant is reminded that a complete reply to a final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Response to Applicants' Arguments:

The 1.132 Declaration by David Brayden and Applicant's remarks in the amendment filed 11/8/04 have overcome the former 112, first enablement rejection and the lack of antecedent support in the specification objection concerning the "two subpopulations of microparticles wherein the antigen in the microparticles of the first subpopulation is different than the antigen in the microparticles of the second subpopulation".

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21-25, 27-31, 33, 35, 38, 39, 41-43 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "A method of inducing a protective immune response, said method comprising orally administering to a subject therapeutically effective amounts of at least a first and a second subpopulation of microparticles/nanoparticles, wherein each of said microparticles comprises a *B.pertussis* antigen entrapped or encapsulated by a biocompatible, biodegradable polymer, and wherein the antigen in the micro(nano)particles of the first subpopulation is different than the antigen in the micro(nano)particles of the second subpopulation and at least 50% of the microparticles are less than 5 um {or 3 um or 600 nm), does not reasonably provide enablement for "A method of inducing a protective immune response, said method comprising orally administering to a subject therapeutically effective amounts of at least a first and a second subpopulation of microparticles/nanoparticles, wherein each of said microparticles comprises ***any*** antigen entrapped or encapsulated by a biocompatible, biodegradable polymer, and wherein the antigen in the microparticles of the first subpopulation is different than the antigen in the micro/nanoparticles of the second subpopulation and at least 50% of the micro/nanoparticles are less than 5 um {or 3 um or 600 nm). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The instant specification successfully demonstrates a method of providing a protective immune response by orally administering two separate subpopulations of microparticles/nanoparticles (such that at least 50% of the microparticles are less than 5um, and preferably less than 3um; or for nanoparticles less than 600nm), each containing a different *B.pertussis* antigen. The specification provides results using inactivated pertussis toxin (PTd), filamentous hemaglutinin (FHA) and pertactin. However, the scope of the instant inventions reads on providing a protective immune response against diseases that do not have a known, proven vaccine, e.g., HIV, cancer, herpes simplex type I, etc.. The scope of the claims require the method to elicit a 'protective' immune response. It would take undue experimentation for one of skill in the art to discover a method for curing HIV, cancer, herpes simplex type 1, etc. as is instantly encompassed by the claims. The specification only briefly mentions the use of other antigens, on page 8, lines 16-23, and these antigens include: tetanus toxoid, HIV GP-120, hepatitis B surface antigen, diptheria toxoid, herpes simplex type 1, human papilloma virus, polio, influenza epitopes, H. pylori; shigella; chlorea, salmonella, rotavirus, respiratory virus, yellow fever, hepatitis A, hepatitis C, meningococcal type A, meningococcal type B, meningococcal type C, pneumococcal, leischmania, tuberculosis, and cancer vaccine antigens. However, no working examples, with the exception of using *B.pertussis* antigens, are provided.

Genentech Inc. v. Novo Nordisk A/S (CAFC) 42 USPQ2d 1001 clearly states: "Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. See Brenner v.

Manson, 383 U.S. 519, 536, 148 USPQ 689, 696 (1966) (stating, in context of the utility requirement, that "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.") Tossing out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention. This has not been met with regards to a method for protecting against HIV, herpes, cancer, etc.. Applicants have not enabled a reasonable number of species. Only results from *B.pertussis* have been shown.

Enablement requires that the specification teach those in the art to make and use the invention without undue experimentation. Factors to be considered in determining whether a disclosure would require undue experimentation include (1) the nature of the invention, (2) the state of the prior art, (3) the predictability or lack thereof in the art, (4) the amount of direction or guidance present, (5) the presence or absence of working examples, (6) the quantity of experimentation necessary, (7) the relative skill of those in the art, and (8) the breadth of the claims. It would take undue experimentation for one of skill in the art to practice the broad invention as claimed because the prior art teaches that vaccines against the diseases encompassed in claims 44 and 45 are not known. The vaccine art is highly unpredictable and the specification has only provided guidance and examples for the use of B.pertussis antigens. While the level of skill in the art is high, the breadth of the claims is undue.

Additionally, the claims are drawn to oral administration which works well for respiratory antigens, such as the *B.pertussis* antigens which are exemplified. However, the laundry list of potential antigens provided in new claims 44 and 45 comprise antigens which act in very different ways than the *B.pertussis* antigens. It is extremely unpredictable if any of these antigens will work successfully in the oral administration methods recited in the claims, not to mention that many of the antigens have never before been shown to provide a protective immune response. Accordingly, the specification is non-enabling, since one skilled in the art would not be able to make and use those sequences without undue experimentation.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 23-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahin et al.

Shahin et al discloses that microencapsulated pertussis toxoid, filamentous hemagglutinin, and pertactin all retained their immunogenicity when administered parenterally (abstract). It is also disclosed that intranasal administration of these microencapsulated antigens elicited-high levels of specific antibody coinciding with protection against infection when these microspheres are administered to the respiratory tract, i.e., a TH2-polarized protective immune response (abstract). Shanin

specifically discloses that intranasal administration of a combination of lug each of each of the microencapsulated B.pertussis antigens (i.e. microencapsulated pertussis toxoid'. microencapsulated filamentous hemagglutinin'. and microencapsulated pertactin) was more effective in reducing bacterial infection than administration of any single microencapsulated antigen. See abstract. This teaches that subpopulations of different microencapsulated antigens from B.pertussis allow for a better immune response than a single microencapsulated population intranasally. The reference teaches that the microcapsules were 1-10 um in size and composed of biodegradable polyester poly (DL-lactide-co-glycolide)DL-PLG (see 'preparation of microspheres' under 'Materials and Methods'). Although Shahin teaches that success was not found with oral administration of single population of microencapsulated FHA antigen, the reference teaches this is most likely due to the amount of microcapsules administered orally since it was well known in the prior art that less than 1% or an oral dose of DL-PLG microspheres successfully reaches the Peyer's patches. It is noted that Shahin et al did not attempt to increase the dose of microcapsules orally administered, nor did Shahin try orally administering three subpopulations of all three pertussis antigens as was done intranasally.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the combination of individually encapsulated microparticles to orally administer to a host since Shahin teaches that subpopulations of different microencapsulated antigens from B.pertussis allow for a better immune response than a single microencapsulated antigen intranasally. The success seen with

nasal administration of individually encapsulated antigens would have provided motivation for one of ordinary skill in the art at the time the invention was made to administer a larger amount of the microcapsules then was used in the intranasal administration because Shahin specifically recites that it was well known in the prior art that less than 1% or an oral dose of DL-PLG microspheres successfully reaches the Peyer's patches. Oral administration of more than one population of microparticles comprising different *B.pertussis* antigens, using a larger amount of microparticles then was used in the intranasal administration, would have been obvious to one of ordinary skill in the art because it was well known in the art that oral administration can confer protection at remote mucosal surface sites which is very important with respect to respiratory antigens and because the microencapsulation prevents the antigens from getting broken down in the gut. The prior art is replete with references documenting the successful induction of mucosal immune responses following oral administration of DL-PLG microspheres of several encapsulated antigens. (See Shanin et al page 1199, first full paragraph).

Response to Arguments:

Applicants argue that the data presented by Shahin is weak and therefore one of ordinary skill in the art would not consider the use of more than one antigen. This has been fully and carefully considered but is not deemed persuasive. Shahin specifically discloses that intranasal administration of a combination of lug each of each of the microencapsulated B.pertussis antigens (i.e. microencapsulated pertussis toxoid'. microencapsulated filamentous hemagglutinin'. and microencapsulated pertactin) was

more effective in reducing bacterial infection than administration of any single microencapsulated antigen. It is also disclosed that intranasal administration of these microencapsulated antigens elicited-high levels of specific antibody coinciding with protection against infection when these microspheres are administered to the respiratory tract, i.e., a TH2-polarized protective immune response (abstract). The idea of using more than one antigen in different microcapsules is specifically taught. Further, the reference suggests that increasing the dosage when orally administering would also achieve a protective response. The instant claims do not require a specific amount/dosage of microparticles to be used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to administer a larger amount of the microcapsules then was used in the intranasal administration because Shahin specifically recites that it was well known in the prior art that less than 1% or an oral dose of DL-PLG microspheres successfully reaches the Peyer's patches. Oral administration of more than one population of microparticles comprising different *B.pertussis* antigens, using a larger amount of microparticles then was used in the intranasal administration, would have been obvious to one of ordinary skill in the art because it was well known in the art that oral administration can confer protection at remote mucosal surface sites which is very important with respect to respiratory antigens and because the microencapsulation prevents the antigens from getting broken down in the gut.

Applicants other arguments are rendered moot due to the new grounds of rejection.

6. Claims 28-31, 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahin et al in view of O'Hagan (US5,603,960).

The teachings of Shahin et al are set forth above. However, they do not particularly exemplify the use of nanoparticles in which 50% are under 600nm.

O'Hagan et al describe methods for producing microparticles useful in the formulation of pharmaceutical compositions. Methods of immunizing mammals against diseases comprising administering to the mammal an effective amount of antigen-containing microparticles are disclosed. Vaccines comprising a pharmaceutical composition comprising said microparticles are also disclosed. It is disclosed that the preferred average microparticle size is between 200 nm and 200um (column 3, lines 33-34). It is disclosed that when the microparticles are to be orally administered, the preferred size of the microparticles is preferably between 100 nanometers to 10 um in size (column 7, lines 2 1-23). It is preferred that the microparticles be administered orally (column 3, lines 40-41).

It is disclosed that the microparticles are preferably made with a biodegradable polymer (column 4, lines 63-3). The solvent media used in the solvent evaporation method to produce the microparticles is dependent upon the material to be encapsulated (column 4, lines 60-63). The preferred polymer for encapsulating the bioactive material is a polylactide polymer, or particularly a polylactide-co-glycolide polymer (column 5, lines 24-30).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use nanoparticles less than 600nm as taught by O'Hagan in the methods of Shahin et al because the prior art specifically discloses that particle uptake by M cells in the mouse gut is restricted to materials with diameters less than or equal to l0 um (page 492, column 2) and that smaller microparticles (1- to 10-um) were more immunogenic than larger particles (20- to 50- um), as the smaller microparticles were rapidly phagocytosed and distributed (page 290, column 1). O'Hagan teaches vaccine compositions comprising microparticles of 100nm to 10 um in size which are made of the same polymers as those used in the methods of Shanin and uses similar methods to produce the microparticles. Since Shahin, also teach DL-PLG encapsulated antigen as vaccines, and specifically teach that the use of smaller microparticles allows, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the particles less than 500 or 600nm, absent unexpected or unobvious results, because a person of ordinary skill in the art would expect such a microparticle to improve the immune response of the method. One of ordinary skill in the art would have a wide knowledge of the appropriate size to make the microparticles depending on their objectives given the large amount of literature available in the prior art at the time the invention was made.

7. Claims 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahin et al in view of Andrainov (US Pat. 5,807,757).

The teachings of Shahin et al are set forth above. However, they do not particularly teach particularly teach that the microparticles were formed by coacervation.

Andrianov et al disclose a method for preparing polyphosphazene microspheres by coacervation (abstract). Andrianov et al disclose that the process of coacervation allows for the microspheres to be produced with a controlled microsphere size distribution without the use of elevated temperatures, organic solvents, water-insoluble core materials or complex manufacturing equipment, such as spray equipment and eliminates generation of the aerosol (column 2, lines 15-23 and lines 51-55). It is taught that the coacervation process is highly reproducible and generates microspheres with an improved, more narrow microsphere size distribution compared to the spray technique and, contrary to the microspheres obtained by spray method, coacervation microspheres do not contain significant amount of larger size aggregates or amorphous precipitate (column 2, lines 55-60). It is specifically taught that this important for the preparation of microspheres for vaccine delivery since the uptakes of these microspheres by M cells is limited to the particles having a diameter of l0 um or less (column 2, lines 61-65). It is disclosed that biological material can be encapsulated by mixing the material with either polyphosphazene solution before microsphere preparation, or with prepared polyphosphazene microspheres (col. 2, lines 24-2%). Andrianov et al teach that the phosphazene polyelectrolyte is preferably biodegradable to prevent eventual deposition and accumulation of polymer molecules at distant sites in the body, such as the spleen (column 4, lines 32-40). The paragraph bridging columns 5 and 6, disclose that the microspheres formed by coacervation, may be employed as carriers of a biological material such as an antigen, which is capable of eliciting an immune response in an animal. The antigen may be derived from a cell, bacterium,

virus particle or a proportion thereof and may be a protein, peptide, polysaccharide, glycoprotein, glycolipid, nucleic acid, or combination thereof which elicits an immune response in an animal, including mammals, birds and fish (column 6,lines 1-10). It is taught that the microspheres which contain antigen may be administered as a vaccine by any method known to those skilled in the art that elicits an immune response, including parenterally, orally or by transmembrane or transmucosal administration (column 6, lines 30-40). The use of pharmaceutically acceptable carrier with the microspheres, i.e., PBS, is taught. It is taught that coacervation enables one to recover an increased yield of microspheres having a size in the micron range (up to 90 differential percent by volume and 95 differential percent by number), and produce microspheres of other sizes if needed without the use of elaborate equipment (column 5, lines 55-61). Example 9 teaches that 90% of particles by number and size are smaller than 6.6um, Example 6 teaches that microparticles with a mean size between 4-6um were formed and Example 2 teaches that the percentage of microspheres under 10um is 90%(by volume) and 99.7% (by number).

It would have been prima facie obvious to one of ordinary skill in the art to produce the microparticles taught by Shahin by the coacervation methods taught by Andrianov et al because the primary references teach that PLG are biodegradable polymers with a long history of safe use in humans and Andrianov specifically teach that coacervation methods have many advantages over solvent evaporation methods, such as highly reproducible and generates microspheres with an improved, more narrow microsphere size distribution compared to the spray technique and, contrary to the

microspheres obtained by spray method, coacervation microspheres do not contain significant amount of larger size aggregates or amorphous precipitate (column 2, lines 55-60). Absent evidence to the contrary, one of ordinary skill in the art would expect another biodegradable polymer, such as PLG, to work equally as well in the coacervation methods taught by Andrianov et al. and would allow for the production of a safe and effective microparticle vaccine.

8. Claims 39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahin et al and O'Hagan in further view of Andrainov (US Pat. 5,807,757).

The teachings of Shahin and O'Hagan et al are set forth above. However, they do not particularly teach particularly teach that the microparticles were formed by coacervation.

Andrianov et al disclose a method for preparing polyphosphazene microspheres by coacervation (abstract). Andrianov et al disclose that the process of coacervation allows for the microspheres to be produced with a controlled microsphere size distribution without the use of elevated temperatures, organic solvents, water-insoluble core materials or complex manufacturing equipment, such as spray equipment and eliminates generation of the aerosol (column 2, lines 15-23 and lines 51-55). It is taught that the coacervation process is highly reproducible and generates microspheres with an improved, more narrow microsphere size distribution compared to the spray technique and, contrary to the microspheres obtained by spray method, coacervation microspheres do not contain significant amount of larger size aggregates or amorphous precipitate (column 2, lines 55-60). It is specifically taught that this important for the

preparation of microspheres for vaccine delivery since the uptakes of these microspheres by M cells is limited to the particles having a diameter of l0um or less (column 2, lines 61-65). It is disclosed that biological material can be encapsulated by mixing the material with either polyphosphazene solution before microsphere preparation, or with prepared polyphosphazene microspheres (col. 2, lines 24-2%). Andrianov et al teach that the phosphazene polyelectrolyte is preferably biodegradable to prevent eventual deposition and accumulation of polymer molecules at distant sites in the body, such as the spleen (column 4, lines 32-40). The paragraph bridging columns 5 and 6, disclose that the microspheres formed by coacervation, may be employed as carriers of a biological material such as an antigen, which is capable of eliciting an immune response in an animal. The antigen may be derived from a cell, bacterium, virus particle or a proportion thereof and may be a protein, peptide, polysaccharide, glycoprotein, glycolipid, nucleic acid, or combination thereof which elicits an immune response in an animal, including mammals, birds and fish (column 6,lines 1-10). It is taught that the microspheres which contain antigen may be administered as a vaccine by any method known to those skilled in the art that elicits an immune response, including parenterally, orally or by transmembrane or transmucosal administration (column 6, lines 30-40). The use of pharmaceutically acceptable carrier with the microspheres, i.e., PBS, is taught. It is taught that coacervation enables one to recover an increased yield of microspheres having a size in the micron range (up to 90 differential percent by volume and 95 differential percent by number), and produce microspheres of other sizes if needed without the use of elaborate equipment (column

5, lines 55-61). Example 9 teaches that 90% of particles by number and size are smaller than 6.6um, Example 6 teaches that microparticles with a mean size between 4-6um were formed and Example 2 teaches that the percentage of microspheres under 10um is 90%(by volume) and 99.7% (by number).

It would have been prima facie obvious to one of ordinary skill in the art to produce the microparticles taught by Shahin and O'Hagan by the coacervation methods taught by Andrianov et al because the primary references teach that PLG are biodegradable polymers with a long history of safe use in humans and Andrianov specifically teach that coacervation methods have many advantages over solvent evaporation methods, such as highly reproducible and generates microspheres with an improved, more narrow microsphere size distribution compared to the spray technique and, contrary to the microspheres obtained by spray method, coacervation microspheres do not contain significant amount of larger size aggregates or amorphous precipitate (column 2, lines 55-60). Absent evidence to the contrary, one of ordinary skill in the art would expect another biodegradable polymer, such as PLG, to work equally as well in the coacervation methods taught by Andrianov et al. and would allow for the production of a safe and effective microparticle vaccine.

9. Correspondence regarding this application should be directed to Group Art Unit 1645. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Remsen. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15,1989). The Group 1645 Fax number is (703) 872-9306 which is able to receive transmissions 24 hours/day, 7 days/week.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer E. Graser whose telephone number is (571)

272-0858. The examiner can normally be reached on Monday-Friday from 7:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith, can be reached on (571) 272-0864.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-0500.

J Graser

Jennifer Graser
Primary Examiner
Art Unit 1645

11/29/04